LOWER SILVER CREEK WATERSHED PROJECT

MAINTENANCE PLAN

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Table of Contents

SECTION	PAGE

1. Introduction	
1.1 Requirements for Maintenance Plan 1	
1.2 Approach 1	
2. Maintenance Baseline	
2.1 Description of Maintenance Activities 3	
2.1.1 Objective	
2.1.2 Maintenance History	
2.2 Summary of Engineer's Reports and Permits 5	
2.3 Erosion and Sedimentation 5	
2.4 Overview of Routine Stream Maintenance Activities under the	Stream Maintenance Program
(SMP) 6	
2.4.1 Sediment Removal	
2.4.2 Vegetation Management	
2.4.3 Bank Protection	
2.5 Baseline Maintenance Guidelines and Activities 9	
Coyote Creek Confluence (0+00) to Capitol Expressway (155+00).	
Capitol Expressway (155+00) to Cunningham Avenue (244+00)	
3. Maintenance Guidelines for Proposed Lower Silver Creek Proje	
3.1 New Lower Silver Creek Project Maintenance Requirements	16
3.2 Maintenance Activities 16	F4
3.2.1 Vegetation Management Requirements for Cross-sectional	
3.2.2 Reach by Reach Maintenance Guidelines	
All Reaches	
Reaches 1b and 1c	
Reach 2	
Reaches 3a, e and f	
Reaches 3b and 3d	
Reach 3c	
Reaches 4, 5 and 6	
3.3 Best Management Practices 27	
515 Bost Management Maddees 27	
Attachment 1: Proposed Project Typical Cross-Sections for Reaches	1 through 6
Attachment 2: Vegetation Codes (from SMP 2001)	
Attachment 3: BMPs (from SMP 2001)	

List of Tables

TABLES PAGE

Table 1 Available Studies and Plans for Lower Silver Creek	4
Table 2 As-Built Drawings for Lower Silver Creek	4
Table 3 Description of Channel Type from As-Builts	5
Table 4 Average Annual Erosion and Sediment Yield (1990)	6
Table 5 Sediment Deposition by Flood Frequency (1990)	
Table 6 Existing Maintenance Guidelines for Lower Silver Creek, #4026	10
Table 7 Average Historic Periodic Maintenance Activities Pertaining to Channel Capacity, Fiscal Ye	
1990-1998	12
Table 8 Maintenance History of Activities Pertaining to Channel Capacity: Fiscal Years 1990 to 1995	813
Table 8 (Con'd.) Maintenance History of Activities Pertaining to Channel Capacity: Fiscal Years 199 1998 14	€0 to
Table 9 Lower Silver Creek – SCVWD Sediment Removal Records, 1977- 1995	15
Table 10 Look-up Table for Existing Maintenance Reach Definition vs. Projected Maintenance Reac	h
Definition	17
Table 11. Comparison of Allowable Vegetation Conditions Under the Existing Guideline and Equiv	alent
Vegetation Conditions Under the Proposed Project	19
Table 12 Lower Silver Maintenance Acreage for the Proposed Project	22
Table 13 Lower Silver Maintenance Standards for Sediment Removal and Vegetation Management	
Reaches 1a and 1d – Natural Earth Slopes	23
Table 13 (Con'd.) Lower Silver Maintenance Standards for Sediment Removal and Vegetation	
Management Reaches 1b and 1c	24
Table 13 (Con'd.) Lower Silver Maintenance Standards for Sediment Removal and Vegetation	
Management Reach 2	25
Table 13 (Con'd.) Lower Silver Maintenance Standards for Sediment Removal and Vegetation	
Management Reach 3c	26

1. Introduction

1.1 Requirements for Maintenance Plan

This Maintenance Plan (Plan) presents a description of maintenance activities associated with maintaining the as built conditions of the Lower Silver Creek Watershed Project (Project). The Plan provides information on project history, maintenance baseline, and projected maintenance activities following the project construction scheduled to start in April 2002 and end in October 2005. The Plan intend to provide regulatory agencies, such as the U.S. Army Corps of Engineers, and the San Francisco Bay Regional Water Quality Control Board, with an adequate description of projected maintenance activities in support of the District application for CWA section 401 Water Quality Certification and Waste Discharge Requirement.

The Project also includes a comprehensive revegetation component that includes approximately 6 acres of wetlands and approximately 14 acres of riparian and upland vegetation. Maintenance activities related to the revegetation component are described in the companion document: *Mitigation and Monitoring Program for Lower Silver Creek Project*.

The maintenance plan is developed to ensure the integrity and effective operation of the proposed flood control measures. In the plan, anticipated maintenance activities are described and guidelines to determine when channel cleaning is necessary are presented. Upon completion of construction, the activities and standards listed in this plan would supersede the existing maintenance program and the current memorandum of Understanding with the California Department of Fish and Game. In general, it is anticipated that the maintenance activities would be similar to those currently practiced but less frequent.

1.2 Approach

It is understood that all baseline activities, as described in Section 2 below, would be covered by the Stream Maintenance Program (SMP), which is currently undergoing environmental review. The goal of the SMP is to obtain CEQA clearance, as well as 10-year environmental permits (Section 404, Section 401, WDR and Section 1601 Streambed Alteration Agreement) for all routine maintenance activities required within the District jurisdiction. The SMP was developed as a long-term guidance to implement routine stream and canal maintenance projects with the goal of meeting the District's flood protection and water supply mandates in a feasible, cost-effective, and environmentally-sensitive manner. The SMP environmental permits are currently scheduled to be available to cover year 2002 maintenance activities.

All projected maintenance activities resulting from the implementation of the Project that are not included in the maintenance baseline require a distinct environmental compliance process. Also requiring a distinct environmental compliance process are activities that would exceed the maintenance baseline either in terms quantities/frequency of sediment removal, length/frequency of bank stabilization, or extent/frequency of vegetation removal. Section 3 describes maintenance activities that are proposed for the Project. As stated in the Initial Study/Negative Declaration and Environmental Assessment/Finding of No Significant Impact (IS/ND and EA/FONSI; December 2000) and the Draft Addendum to the IS/ND and EA/FONSI (July 2001), routine maintenance activities, as described herein, will not result in significant impacts.

The objectives of this maintenance plan are as follows:

- Standardize practices and protocols for routine sediment removal, vegetation management, and bank protection in Lower Silver Creek in a manner that is consistent with the District's Stream Maintenance Program
- Ensure routine stream maintenance activities that reflect the District's policies of environmental protection and stewardship.
- To the extent practical, avoid or minimize adverse environmental effects and encourage preservation and restoration.
- Establish effective and economically-practical compensatory mitigation if required for environmental impacts from routine stream maintenance activities.
- Establish practices and protocols that optimize operational flexibility and allow the integration of lessons learned and improvement in Best Management Practices.
- Identify cost-effective routine stream maintenance practices and protocols

The maintenance plan will be used by District staff to ensure that routine stream maintenance practices are conducted in an efficient, consistent, and environmental-sensitive manner.

2. Maintenance Baseline

2.1 Description of Maintenance Activities

2.1.1 Objective

Goals of the maintenance program for Lower Silver Creek include keeping the stream and channel sufficiently clear to meet the original design flood protection criteria at all times, protecting aquatic and riparian habitat for fish and wildlife, and maintaining safe conditions within Lower Silver Creek. General tasks to be performed during annual maintenance operations include fence repairs, trash removal, weed control, and elimination of any potentially hazardous conditions. Removal of sediments and vegetation in the waterway, restoration of abraded concrete, and bank protection will also be necessary according to annual inspections. Routine maintenance operations are usually performed during the summer or early fall. Sediment and vegetation removal will be scheduled to minimize adverse impacts to fish and wildlife resources.

2.1.2 Maintenance History

In the early 1950s, farmers diverted Lower Silver Creek into a man-made channel between the Lake Cunningham area and what was then North Babb Creek. This diversion was installed to reclaim the wetland areas for agricultural purposes. In the mid-1950s, developers began purchasing the agricultural land in the area and converted it to residential and commercial uses. This created a serious potential for large flood damages.

The Santa Clara Valley Water District (District), the agency responsible for flood control in the county, has installed several projects in an efforts to reduce flooding from Lower Silver Creek. A summary of these projects are followed:

- 1956-1958: Enlarged the channel between Coyote Creek and Capitol Avenue (now Capitol Expressway).
- 1970s: Diverted the upper portion of Lower Silver Creek Watershed to Coyote Creek. Realigned and enlarged the channel between Capitol Expressway and King Road, upstream of the Lake Cunningham area. Enlarged Thompson Creek from Lower Silver Creek through Quimby Road.
- 1976: Further enlarged the channel section between Capitol Expressway and Cunningham Avenue.
- 1978-1979: Installed, with the cooperation of the City of San Jose, Lake Cunningham that provides 590 acre-feet of flood storage. Installed setback levees along Thompson Creek from Quimby Road upstream to Cadwallader Avenue.

These changes in the Lower Silver Creek channel, along with the installation of Lake Cunningham and work on Thompson Creek, have reduced the potential of high flood damages from smaller, more frequent storms.

In 1980, the District and the Guadalupe-Coyote Resource Conversation District requested that the USDA/Natural Resources Conservation Service (NRCS) assist in further reducing potential flood damages by preparing a watershed work plan.

In July 1983, a Final Watershed Plan and Environmental Impact Statement and Report was prepared for Lower Silver Creek Watershed, but the project was not completed (1983 EIR/S).

In December 1998, the Alternatives Analysis and Watershed Plan sponsored by the District, the GCRCD and the NRCS Updated the plan proposed in the July 1983 EIR/S in response to environmental concerns. The 1998 plan was revised in 2001. This revised plan corresponds to the proposed project and is described in the *Draft Addendum to the Initial Study/Negative Declaration* (August 2001). A summary of available Studies and Plans for Lower Silver Creek is presented in Table 1.

Therefore, the as-built drawings shown in Table 2 were adopted as the basis for the Lower Silver Creek maintenance baseline. The description of channel type is summarized in Table 3. The existing maintenance guidelines for Lower Silver Creek Watershed will adopt the same standards for sediment management and bank protection as those defined in the District Stream Maintenance Program (SMP), and equivalent standards

Table 1
Available Studies and Plans for Lower Silver Creek

Reach (by Station)	As Built Plans	Planning Study Date	Benefit Area Map Date	Pre-Existing Maintenance Guidelines
0+00 to 24+00	1956	1983	1983	1983
51+70 to 114+25	1958	1983	1983	1983
114+25 to 240+51	1977	1983	1983	1983

Table 2
As-Built Drawings for Lower Silver Creek

D/S #	D/S Location	U/S #	U/S Location	As-Built Year
0+00	Confluence w/ Coyote Creek	24+00	U/S N. Marburg Way	1956
51+70	D/S King & McKee Roads	114+25	Kammerer Street	1958
114+25	Kammerer Street	240+51	D/S Cunningham Ave	1977

Table 3
Description of Channel Type from As-Builts

D/S #	D/S Location	U/S #	U/S Location	Channel Type
0+00	Confluence w/ Coyote Creek	17+42	D/S Highway 101	Earth w/ Levees and Bench
18+00	Highway 101	24+00	U/S N. Marburg Way	Trapezoidal Earth
51+70	D/S King & McKee Roads	79+40	D/S Driveway Bridge	Trap. Earth w/ some Levees
79+40	D/S Driveway Bridge	98+45	U/S Lausett Ave.	Concrete Trapezoidal
99+50	U/S Lausett Ave.	114+25	Kammerer Street	Trapezoidal Earth w/ Levees
151+00	D/S Capitol Expressway	157+68	U/S Capitol Expwy	Trapezoidal Earth
159+68	U/S Dover Way	178+14	D/S Story Ave.	Earth w/ Levees and Bench
181+25	D/S Story Ave.	240+51	D/S Cunningham Ave.	Earth w/Bench

2.2 Summary of Engineer's Reports and Permits

- Engineer's Report: As-built plans as shown in Table 2
- Station Limits Downstream (D/S) 0+50 Upstream (U/S) 244+61
- CEQA Document: SMP, Draft EIR (April 2001)
- Corps 404 permits: Being processed under the SMP
- CDFG Permit: Being processed under the SMP

2.3 Erosion and Sedimentation

According to the 1983 EIR/S, about 85 percent of the total erosion in the watershed occurs on the rangeland in the upper watershed (see Table 4). Erosion rates of 0.1 to 9.3 tons per acre per year occur.

The District has installed three debris basins for the primary purpose of controlling sediment from burned or urbanizing areas in the upper watershed. Sediment yields from rangeland and urbanizing land shown in Table 4 include sediment reduction due to the installation of basins and the on-going land treatment program of the Guadalupe-Coyote Resource Conservation District (GCRCD). Of the 12,600 acres of hillside and rangeland, 70 percent is adequately treated.

The 14,920 tons of sediment is the sediment yield to Coyote Creek. On an average annual basis, 6,890 tons are deposited in the debris basins, 90 tons in Lake Cunningham, and 970 tons on the floodplain. For specific storm events, sediment values will vary as shown in Table 5.

Table 4
Average Annual Erosion and Sediment Yield (1990)

Source	Erosion		Sediment Yield to	
			Coyote Creek	
	(Tons/Year)	(Percent)	(Tons/Year)	(Percent)
Sheet and Rill				
Rangeland	27,560	85	11,500	77
Urbanizing Land				
Residences	779	2	530	4
Roads and Driveways	770	2	520	3
Urban Land	750	2	500	3
Open, Unimproved Land in	470	2	310	2
Urban Service Area				
Streambanks	440	2	420	3
Gullies	160	1	120	1
Existing Roads	1,330	4	1,020	7
Total	32,270	100	14,920	100

Table 5
Sediment Deposition by Flood Frequency (1990)

Flood Frequency	Sediment Deposition	on (Tons)		Sediment Yield to
(Years)	Debris Basin	Lake Cunningham	Floodplain	Coyote Creek (Tons)
10	16,110	110	2,610	33,280
25	25,760	810	6,970	46,380
50	32,200	1,270	11,320	57,770
100	38,640	2,110	20,080	68,920
500	38,640	5,020	35,790	126,570

2.4 Overview of Routine Stream Maintenance Activities under the Stream Maintenance Program (SMP)

The Stream Maintenance Program (SMP) is designed to be a process and policy document that will be adopted by the District. Once adopted, the SMP will be used by the District to guide the implementation of routine stream maintenance activities and projects. The SMP is subject to future revisions as

improvement and modifications are made to reflect the best available knowledge, technology and practices.

The routine stream maintenance work includes three major types of activities: sediment removal, vegetation management, and bank protection. More minor maintenance activities such as fence repair, trash removal, and removal of downed trees or other blockage are also included in the definition of routine stream maintenance. Routine stream maintenance does not include emergency repair. Routine stream maintenance does not alter the flood conveyance or water supply capacity of a stream or canal.

The following provides a brief discussion of the major activities addressed by the SMP.

2.4.1 Sediment Removal

Sediment removal is the act of mechanically removing sediment that has accumulated within a stream. Typically, sediment is removed when it: (1) reduces stream capacity, (2) prevents facilities or appurtenant structures from functioning as intended, or (3) impedes fish passage and access to fish ladders.

In most cases, sediment deposition is a natural process that occurs where the stream gradient flattens out in the valley floor or where the gradient is otherwise flat over long reaches. In developed areas, this deposition affects flood flow capacities.

Typical equipment used for sediment removal includes excavators, draglines, loaders, and 10- or 20-cubic-yard dump trucks. If water must be bypassed around the site during work, water pumps and piping, and cofferdams of earth, gravel, sandbags, hay bales, rubber, or other appropriate material may be used. In some cases, a bypass channel or detention basin is appropriate to isolate a site. Typically, sediment removal projects are implemented in the dry season (April 15 through October 15).

2.4.2 Vegetation Management

Management of vegetation in and adjacent to Lower Silver Creek is necessary to maintain the ability of channels to function as flood protection facilities. Vegetation removal can occur in the same physical area as sediment removal. In addition, vegetation is removed to meet local fire code requirements and to reduce combustible weeds and grasses on property adjacent to the streams within the District's jurisdiction. The control of invasive non-native vegetation is another purpose for which the District undertakes vegetation control. This type of vegetation can lead to reduced channel capacity and overall habitat degradation. The District also manages vegetation to protect levees and concrete linings from plant roots, to provide visual clearance to inspect the condition of a facility, and to provide access along maintenance roads.

The District also plants and maintains revegetation or mitigation projects, often along the creeks. In the first few years after initial planting, it is important to control weeds at revegetation sites to increase the number of native trees and shrubs which survive and to more quickly establish a self-sustaining plant community which provides quality wildlife habitat.

Vegetation management can be accomplished through mowing, discing, hand clearing, or herbicide applications (depending on the environmental conditions of the site). A method or combination of methods is chosen for each site depending on the maintenance requirements of the facility. Efficiency, economics, and the protection of public health and environmental resources are all considered in the selection of methods.

Because of their ability to affect the roots of target plants, thus preventing resprouting. herbicides can offer a more effective vegetation control method than mechanical or hand removal With herbicides, annual retreatment is often necessary; however, the treatment area is greatly reduced. As a result, the District includes herbicides as the primary method by which vegetation is controlled in channels and on streambanks.

Herbicides are not broadcast sprayed across the channel but are selectively sprayed at the plants targeted for removal. In addition, the District only uses herbicides according to the label direction and for uses approved by the United States Environmental Protection Agency and California Department of Pesticide Regulation. The SMP provide more specific information on the District's herbicide use.

The frequency of vegetation management activities varies from semiannually to once every several years, depending on the method used. Herbicide spraying in stream channels is conducted from July 1 through October 15. Removal of woody vegetation by hand is conducted from July 1 through March 1. Hand removal in stream channels is conducted from November through December.

Vegetation management occurs in creeks, canals, and adjacent uplands. Vegetation management activities are relatively the same from year to year. Slight variations in flood protection activities occur due to weather patterns.

2.4.3 Bank Protection

Bank protection involves any action by the District to repair streambanks that are eroding as well as installing preventative erosion protection. The District implements bank protection when the problem (1) causes or could cause significant damage to a property or adjacent property, (2) is a public safety concern, (3) negatively affects transportation, (4) negatively affects beneficial uses of surface water, or (5) negatively affects riparian habitat. Repairs may take several forms ranging from the installation of "hard" structures (i.e. rock, concrete, sack concrete, gabions) to the use of "soft" structures (i.e., willow brush mattresses, log crib walls, pole plantings) or a combination of hard and soft structures. Bank protection also includes preventative maintenance to ensure that banks do not fail in the future. Such bank protection can reduce sedimentation and improve water quality.

Streambank erosion is a natural process, which mostly happens during major storm events. Erosion can occur because of hydraulic forces and geotechnical instabilities, and can be accelerated by human intervention and land uses. Erosion of bank can result in increased sediment deposition, and may cause vegetation and soil loss, damage to private or public property, transportation and utility impacts, safety hazards, and turbidity injurious to fish and aquatic life.

Bank protection work may either occur as repair of an existing bank protection project which is failing, or as new work along a bank which is eroding. Repair of existing bank protection structures occurs when these structures fail and the area is replaced with in-kind, in-place materials. New bank protection projects or repairs protect the watercourse from further degradation or erosion using the most appropriate method.

Equipment used for bank protection may include excavators, dozers, cranes, loaders and 10- and 20-cubic-yard dump trucks, concrete trucks, pumps, and water trucks. If water must be bypassed around the site during repair work, water pumps and piping, and cofferdams of earth, gravel, sandbag, hay bales, rubber, or other suitable material may be used. In some cases, a bypass channel or detention basin is used to isolate a site. Most often, bank protection projects are implemented during the dry season.

The general design criteria and plan for each of the bank protection methods routinely used by the District are included in Appendix E of the SMP. In addition to these criteria, design of a particular bank protection project includes evaluation of site-specific characteristics such as bank slope, shear stress, location, soil type, flow velocity, characteristics of the channel adjacent to the site, and the available right-of-way. The site is evaluated for the repair method consistent with the characteristics of the site. Revegetation potential is also evaluated for each bank protection project.

For all bank protection projects, the District makes an inspection of the stream upstream and downstream of a project site to determine if there is an identifiable cause of the erosion. The cause factors can affect the bank protection approach implemented by the District. Facilities are inspected after the winter storms

for damage and maintenance needs and a work plan is prepared. The maintenance needs vary from year to year.

2.5 Baseline Maintenance Guidelines and Activities

Coyote Creek Confluence (0+00) to Capitol Expressway (155+00)

(Reach 4026901 – Corresponding to Reaches 1a to 4a of the Project)

This reach consists of several channel types such as earth channel with levees and bench, trapezoidal earth channel, trapezoidal earth channel with levees and concrete trapezoidal channel. Existing maintenance guidelines for this reach (and sub-reaches) are included in Table 6. The table reports on allowable Manning's n value, allowable vegetation conditions according to vegetation codes described in Appendix B of the SMP (also provided in Attachment 2), and critical height of sediment allowed to accumulate on the channel bottom. The five different vegetation codes represent conditions ranging from no vegetation to heavy vegetation and were established to account for the wide differences in vegetation quantity and type typical in District facilities. Depending on local vegetation growth conditions, the vegetation removal frequency ranges from annually to once in 10 years.

Table 6 Existing Maintenance Guidelines for Lower Silver Creek, #4026

	Reach Location and Description			Maintenance	Maintenance guidelines for Existing Q1%	for Existing	21%	
station	Station D/S Cross Street	D/S Station	U/S Station	D/S Station U/S Station Channel Type	Allowable n	Allowable Vegetation Condition (a)	Allowablo Sediment Hoight (ft)	Comments
Reach 40	Reach 4026901: Coyole Creek Confluence (0+00) to Capitol Expressway (155+00)							
	1 Confluence w/ Coyole Creek	00+0	13+16	Earth w/ levees, bench	0.035	8	1.6	
	2 U/S GCPRR	14+16	17+42	Earth w/ levees, bench	0.055	ш	9.6	
.,	3 Hwy 101	18+00	24+00	Trapezoidal earth	0,040	o	67	۵
	4 UrS N. Marburg Way	24+00	51+70	Trapezoidal earth	0.030	*	0	۵
47	5 D/S King and McKee Roads	51+70	79+40	Trapezoidal earth w/ levees sometimes	0.030	V	0.5	۵
9	6 DrS Driveway Bridge	79+40	98+45	Concrete trapezoidal	0.015	A	970	0,4
-	7 U/S Lausell Avenue	89+50	114+25	Trapezoidal earth w/ levees	0.035	60	1.5	٥
	8 Kammerer Street	114+25	151+00	Trapezoidal earth	090'0	0	2.5	۵
"	9 U/S Galahad Avenue	161+00	157+68	Trapezoidal earth	0.030	A	0	۵
Reach 40	Reach 4028902: Capitol Expressway (155+00) to Thompson Creek Confluence (316+70)	+70)						
10	10 U/S Dover Way	159+68	178+14	Earth levees w/ bench	0.03	A	0	۵
11	11 D/S Story Avenue	181+25	240+51	Earth w/ levees	0.03	A	0	p.d
12	12 DVS at Cunningham	245+00	280+00	Along Lake Cunningham	NGA	N.A.	N/A	b,e
ower Silv	Lower Silver Greek Comments							
	See "Vegelation Codes" Section: Key to Vegetation Conditions and Incres	and Increased Channel Roughness	oughness					
٩	Existing Q1% is lower than the full Q1% when upstream overtanking reduces downstream flow. Maintenance guidelines are presented for existing Q1%	oes downstrear	n flow. Mainten	ance guidelines are presented for existin	19 01%			
0 0	Levees begin station 74.3 and station 79.4 Transitions between 228-00 and 231-490 are mobile transposed under hides	hidas		7,				
8	New Siver Creek goes through Lake Cunningham. Plans and cross-sections for this project not in as built files in CPR. The channel stope is 0 for this section. The channel width yarded as did the side shapes	ons for this proje	ct not in as bu	If files in CPR. The channel stope is 0 for	r this section. th	a channel width	by varied as did	the side slopes
	Calculations were not run.							-

The average historic frequency of sediment and debris removal, vegetation management and bank protection activities conducted between 1990 and 1998 can be found in Table 7. The maintenance history of vegetation management and bank stabilization activities pertaining to channel capacity from 1990 to 1998 is included in Table 8. Sediment removal activities conducted from 1977 to 1995 are summarized in Table 9. The District estimates that it removes 14,955 cubic yards of sediment on about 4.9 miles of channel in this reach from December 1987 to August 1991. No sediment removal activity was documented for this reach since then.

Capitol Expressway (155+00) to Cunningham Avenue (244+00)

(Reach 4026902 - Corresponding to Reaches 4b to 6b of the Project)

This reach consists of earth channel with levees or/and a bench and includes Lake Cunningham which is beyond the Project's upstream limit. Existing maintenance guidelines for this reach are included in Table 6.

The average historic frequency of sediment and debris removal, vegetation management and bank protection activities conducted between 1990 and 1998 can be found in Table 7. The maintenance history of vegetation management and bank stabilization activities pertaining to channel capacity from 1990 to 1998 is included in Table 8. Sediment removal activities conducted from 1977 to 1995 are summarized in Table 9.

The District estimates that it removed 5,130 cubic yards of sediment on about 1.0 mile of channel in the reach from January 1981 to July 1987. No sediment removal activity was documented for this reach until Spring 2000. An estimated sediment volume of 2,100 cubic yards is proposed for removal the District Sediment Characterization Plan (Final) for Year 2000 sediment removal projects. In February 1998, a probable landslide in the upper watershed triggered the accumulation of several feet of sediment and a bank failure just below South Babb Creek (Table 6, station 11).

Table 7
Average Historic Periodic Maintenance Activities Pertaining to Channel Capacity, Fiscal Years 1990-1998

District Activity No.	Description	Average Frequency
Reach 4026900: Silver Creek	l	
1010	Sediment and Debris Removal – IN CHANNEL	Once every 2 years
3010, 3100	Pre-Emergent Herb – Mechanical, Hand	Once a year
3080, 3090	Vegetation/Woody/Weed Control – IN CHANNEL	Twice a year
Reach 4026901: Coyote Creek Co	onfluence (0+00) to Capitol Expressv	vay (155+00)
1010	Sediment and Debris Removal – IN CHANNEL	Once in 8 years
2010	Erosion Control – Rock, Seed, Repair	Twice a year
3010, 3100	Pre-Emergent Herb – Mechanical, Hand	Twice a year
3020	Post-Emergent Herb - Blanket	Once in 8 years
3040	Revegetation - Blanket	Once in 8 years
3060, 3110	Tree Removal	Once in 8 years
3070, 3080, 3090	Vegetation/Woody/Week Control – IN CHANNEL	Once a year
3150	Misc. Vegetation Control – Weeds	Once every 3 years
Reach 4026902: Capitol Expressy	way (155+00) to Thompson Creek Co	onfluence (316+70)
2010	Erosion Control - Rock	Once in 8 years
3010	Pre-Emergent Herb – Mechanical	Once in 8 years
3060	Tree Removal	Once in 8 years
3070, 3090	Vegetation/Woody/Weed Control – IN CHANNEL	Once every 2 years
3150	Misc. Vegetation Control – Stomp Tules	Once a year

Table 8
Maintenance History of Activities Pertaining to Channel Capacity:
Fiscal Years 1990 to 1998

THOS CHESTOCON	Start Date	Endliste	WAYNO .	-	-							
40960767 SILVER CREEK - BUNSET TO DIS ALLIM RIDCK - MOILLI K	1	1	1	OF NO.	ACIDITY	- 1	Accomp	p Cells	Days	Type	Cont	
960707 SEVER CREEK - BUNSET TO DIS ATTIM BOCK - MALL IN	SAFET/A			76+00 TO 93+00	1010	#16-FACILITY CLN	22	STA	•	3	2	120.58
40951437 SILVER CREEK GILDOTT TO DES AUTOMODIA	802268	10/15/05	\$ 4026900	76+00 TO 93+00	1010	385-FACILITY CLN	22	STA		3		
Absolute of the Chart of the Act	842548	87975	6 4026900	76+00 TO 93+00	1010	386-FACILITY CLN	22	17.		1 2		
Abstract Surger Charter Surger TO DIS ALUE ROCK - MOUS, K	78/197	12/17/97	7 4025930	76+00 TO 93+00	1010	MARKAGE ITY CLIN	: :	1		5 ;		
AMMENDE CHINES CHIEFLY PRE-EMERGENT MECHANICAL - MOULA	10/16/95	10/25/95	\$ 4026900	0+00 TO 377+00	3010	EGG/CEG/CHEMONI		:	٠,	3	-	.
AND THE SHARE SHOULD SHARE SHEET WECKANICAL - MOUTH	10/15/96	11/5/26		0+00 TO 177+60	2	TON THE PROPERTY OF	2 :	2 :		2	200	5,950,27
	Teration	14,5/97		0400 TO 177460	2	SON STATE COLUMNS	:	2	,	3	26'5	5,971.88
	10/15/97	1276/27		0400 TO 177460	,	SOUVES-CHEMICAL	2	No.	11	P.M	1,57	7,576.75
40951515 SEVER CREEK - PRE-EMERGENT HAND LABOR - MOUA	10/16/95	42144124		000000000000000000000000000000000000000	2	**************************************	4.2	¥C	-3	F.	1,107.51	7.51
40M1293 SILVER CREEK - PRE-EMERGENT HAND LABOR - MOULA	40MENG			0400 10 37 7400	3100	605-VEG-CHEDICAL	7.9	¥	N	CR	\$ 2,477,81	5
4295390 LOWER SILVER CREEK - AQUATIC WORK (MOU.8)	714/05		Т	0+0010377+00	3100	600-VEG-CHEMICAL	63	YC.	3	CM	\$ 4,507,50	7.30
40M0245 LONER SILVER CREEK - AQUATIC WORK (MOU-B)	THEFT	-		0+0010377+50	2000	600-VEG-CHEMICAL	22	AC	,	3	\$ 11,620.38	200
840045 LOWER BILVER CREEK - AGUATIC WORK (MOU-II)		TO SERVE		040010 277+50	3069	600-VEG-CHEMICAL		Y		3	\$ 6,177,96	36.
4016300 \$1,VER CREEK WATERSHED - VIIG. REMOVAL - FIDE CTI	Tarret .	TOTAL		0+00 10 377+50	3050	600-VEG-CHEMICAL	-	AC	22	PM	\$ 9268.98	5
40953110 SILVER CREEK-WATERSHED VIC BEN FOR ACCHES MOULT	67675	871/8		0+00 TO 500+00	3080	601-VEG-HON-CHEM	10	AC	2	CM	\$ 17.516.73	77
40HOAT BRVER CK-442 BUNDOWN-RELICVE KHI BE VED GLOSS	3/12/16	200		0+00 TO 150+00	3080	401-VEG-NON-CHEM	•	Y	9	20		
40HOSE7 LWR BLVER CK WTRSHED-VEG REUVI. FOR ACCESS MOLLS	2010	1000	1	300+00 TO 200+78	9000	**************************************	9.0	٧	2	20	Ī	1711
4090252 SIVER CRK - US ALUM ROCK - SAD REMOVAL GLOSD	THE PERSON NAMED IN	LESS.	4024950	11	9000	601-VEG-NON-CHEM	0,25	YC.	9	3	\$ 1,504.71	5
4091570 SILVER CRK - DIS LICKSON - SED DELLOCAL MICH.	16701	1714/01	4020504		0101	SED CLEAN - MECH	-	STA	2		\$ 24 317 90	18
4000130 SILVER CREEK DIS ALLIM ROCK AVE DI ACE BOCK ASED	ENSOI.	8/20/81	1		1010	S&D CLEAN - MECH		STA	40		\$ 621230	8
40940734 LWM BILVER CKCUB BAN ANTONIO BROOKIN SEGUING	Traken	7/26/00			2010	EROSN-ROCK PLACEMNT	~	¥15	90		\$ 17.864.00	2
40 LWR SKVER CK DIS SAN ANTONIO BEOGRAPH CO.	SOURCE STATES	4/16/97		102+00,103+17	2010	347-EROSION CTRL	22	BTA		3		
40951854 LWR SELVER CK-DAS SEN ANTONIO SECOND SECON	10/5/35	10150		102+00,103+17	3010	387-EROSION CTRL	22	STA		70		
4045098 LWR & VIB CK ON SALL ANTONIO TRANSCENSION (FEG.)	10/5/15	10/15/06	4021301	102+50,103+17	2010	187-EROSION CTRL	66	SYA				
ADDAMS REVED TO DO PLOTOS TOTAL CANDERCOSON REPAIR (FEG. C	78/197	12/17/07	4021901	102+00,103+17	2010	387-EROSION CTRI	:	1				
409006 1969 EN UND COLUMN STOCK STOCK STOCK (M)	10/12/94	10/25/94	1025201		2150	EROSN CTRL - MISC	: 6	5				
4000107 SHUMO COCCO, AND AND SCHOOL TO BE PTING	10/12/84	10/20/94	4026901		9	EBOSON CTBL . MISCO	: :	1			1,742,80	99
ADMINISTRATION CONTROL OF THE CHERCIAN WORK	10/10/89	10/1/89	4026901		3010	PAE-FMRC MERRY LIEUT		1			1.578.20	8 :
ANGESTIG CHILED ONE THE CONTOUR PRESENCENT WORKINGUA)	10/16/20	10/22/00	4026901		3010	BEE-EUSC MEDICAL		2 5	, ,		00.181.5	8
4063154 SELVED COV. 116 PERSON WORKLINGS AND ADDRESS SELVED COV. 116 PERSON MORKLINGS AND ADDRESS A	11/26/91	120,01	4025901		3010	PER EURO HERRY AND MACH	3 2	25			6,734.00	2 :
400000 SEVEN COME CONTRACT THE ENGINEER (HOU)	10/22/92	11/2/92	4028901		3010	PRE-EMRO HIRD	30.4	3 5	. ;		2,863.90	2 :
404.072 Strate Car, Delignation of the CHAN, (MOUA)	10/18/93	10/19/93	4025901		3010	PRE-FMRG HERB J MECH	900	2 5			0000000	2 :
4091255 SILVER CKAIS COVOTE DESCRIPTION OF THE COLUMN COLU	10/25/94	10/27/94	4025801		90100	PRE-EMAG HERB / MECH	2	2 5			4,138.10	2 9
4002151 SAVER CRX - US COYOTE - DREEDERS HAND ALCH -	10/17/01	10/10/91	4028201		3100	PRE-EWRG HERB / HAND	2.8	, o			00. 709 2	2 8
4093201 SILVER CK US COYOTE-PRE-EMERG NND 1 BR / LOVIAL	11/4/92	11/4/92			3100	PRE-EURGHERB	2.1	Y			878.00	8
4094070 SILVER CREEK - PRE EMERG - HAND (MOLLA)	DANGE	12103			3100	PRE-EMRG HERB / HAND	4.4	¥		-	1,109.10	9
40M266 LOWER SILVER WISHED-POST EMERGENTINCHAY, RI ANKITY	10034	200	4025901		3100	PRE-EMRG HERB J HAND	3.7	¥C			2,441.30	90
4094265 LOWER SLIVER CRK WISHED - REVEGLISCAPE - BLANKET	40101	Mary and	1069201		3020	POST-EMERG HERB APPL	2	VC.	-		1,351.90	8
4092237 SLVER CREEK UIS ALUM ROCK TREE REMOVAL	100000	Carrier of	4029901		90%	FACILISACUND PROGRAM	253	MH	25		\$ 15,024.80	8
4091175 SILVER CRK - AQUATIC WORK DACULE	101104	28011.00	4026901		3060	TREE REMOVAL - ALL	52	Ε¥	2	-	1,643,10	lº.
4092118 SILVER CRK - AQUATIC WORK CHEM MACULII	18550	18710	4028901		3080	VEGWOODY CTRL- CHEM	31.5	VC.	=	-	11,528,00	8
4093144 SILVER CRIEK - AGUATIC WORK	24,6276	28917	4028301	1		VEGWOOOY CTRL.	11.9	ý			6,164,10	9
4094016 SILVER CRK - AQUATIC WORK - IMOU-81	0692//	0.5483	4028301		3000	VEGWOODY CTRL- CHEM	8.7	ý	10		5,330.00	9
4059126 SLVER CKR DIS SAM ANTONIO - RELICHE CACTURE	876/34	\$23.94	4026301		3080	VEGAVOODY CTRL- CHEM	13	VC	49		9.016.00	8
4089193 SLVER CREEKING MCKES, VIG. REMOVAL GLOUD	7/17/89	2710/109	4026901		0500	VEGAVOODY CTRL- HAND	=	VC.	P		2314 40	3
4090145 SLVER CREEK, US 101 - VEC REMOVAL MOULD C	11/21/89	1/3/90	1009001		0600	VEGWOODY CTRL. HAND	z	VC.	1		37 638 60	: 5
4091115 SILVER CRX - TRIM GROWTH - 115 KALMARDED AVE	10/2/90	11/7/90	4026501		3080	VEGAMOOOY CTRL- HAND	0	YC	2		46 653 69	2 5
4091200 SILVER CRK+ DIS MCKEE - VEG RELICIAN INCHES	101/1	71/81	4026501		3090	VEGWOOOY CTRL. HAND	0.0	Ý	-		1.857.40	2 5
4094053 SILVER CRX - DIS MCKEE - WEED REMOVAL (MOLLS)	10/21/91	20082	4028501			VEGWOOOY CTRL: HAND		ý	10	**	16,596.50	
4069225 LOWER SKVER CRKUS MCKEE ROSTOMP TULES (MOU)	1000000	87784	4055504			VEGWOODY CTRL. HAND	22	VC.	en	*	2,911.30	2
	epaza.	10,208	4025301		3130	MISC VEGAMEED CONTRL	0	100	2	*	1,383.40	lo

Lower Silver Creek Maintenance Plan

Table 8 (Con'd.) Maintenance History of Activities Pertaining to Channel Capacity: Fiscal Years 1990 to 1998

WO # Description	Start Date End Date MAXIMO	find Date	MAXIMO	St. No.	Activity	Activity Activity Type	Accomp Units Days Type	Units	Dave	3	5	,
ADDITION SILVER CRX-US KING TO DIS 101-CRUSH VEG (MOULD	12/16/91	12/17/91	4026901		3150	MISC VEGWEED CONTRI	22	3	ŀ		3 5	2000 40
ADMINE SILVER CACK US CAPITOL EXPWY ROCK PLACEMENT(FAG)	8/10/90	06/91/6	4026902		2010	BROSN- BOCK PLACEMENT	9	1	ŀ			
MOST OF STREET CAPITOL TO NORWOOD CK PRE-EMERGENT WO	10/2/19	10/10/89	4026902		3010	PRE-EMPC HERB INCOM		9			200	49,518.70
WASHING OLIVER CHEEK INS MURTHA - REMOVE TREES	7/7/93	7112/60	1		3060	TREE RELIGION ALL	10.0	2	1			200
1003109 SLVER CREEK US MURTHA - REMOVE TREES	277/93	7/12/93	4024902		9540	Total Designation		Ś			6.0	5,906,20
40V2116 BILVER CRX - DIS GUIMBY - \$TOMP TULES IMOULD	9/22/02	10/8/82	Г			TO THE DEMONSTRATE OF THE PARTY		ž	-		\$ 6.9	6.908.20
4093164 SILVER CRK DIS QUIMBY-STOMP TULES(LIQUES)	10000	00000			9010	VEGWEED CIRL.	43	ý	1		5 11.8	1,844,40
4009297 SILVER CREEK DIS CUNNINGHAM - VEG REMOVAL	-	OCCUPA-			3070	VEGWEED CTRL - MECH	0	٧	24		\$ 1,48	1,481.80
4090140 SLVER CREEK DIS TULLY - WOODY VEG RELIGIAL LICENSE	472780	4/1293			3080	VEGWOODY CTRL: HAND	-	ý	2		5 6.15	6,157,30
400200 SLVIR CREEK & SCUTH BARR, TRILL TOFF	DAVIAG	041040	4026902		3000	VEGWOODY CTRL- HAND		¥Ċ	,		1.72	724.50
4092341 SILVER CREEK UIS OCALA, PALLI RELICIAL	37573	3725783			3050	VEGWOOOY CTRL.	~	¥G.	-		1.22	228.60
4004034 SILVER CK OCALATO CAPITOR CARBARACING COCAMA	40793	477.93			3090	VEGWOODY CTRL-	0.1	YC.	-		92	823.10
408928 LONER CRIVER CRIVE PRINCIPLE STORY STORY	20131	811/54	4026902		3090	VECAMODOY CTRL- HAND	0	AC			576	95 167 6
4090161 SILVER CRK DIS CHINNING AND AVE. STORES THE CHICAGO	10/19/89	10/19/89	4026902		3150	MISC VEGWEED CONTRI	12	¥	*		2.16	2166.50
4090772 SILVER CHK DIS THELY RO - STOUR THE SOLICE INCO-6)	22081	2/22/91	4026902		3150	MISC VEGWEED CONTR.	39	¥			674	6747.50
4091109 SILVER CRK - US STORY ROLLING OFF COURTS - MICH. 8	iesar.	37/81	4020902		3150	MISC VEGWEED CONTR.	17	H	~		7 29	4 592 60
40961340 SEVER CREEK O BARDERRY A CORD F DAVISOR DELICITAL DICE.	10/2001	12/13/91	4020302		3150	MISC VEGWEED CONTRL	94	ī	9		11,473.30	8
43942034 SLVER CREEK TRASH AND DEBRIS-OBSTRUCTING BLOW OF	1077/96	10.00	4026902	154+60 TO 316+70	3150	600-VEG-CHEMICAL	£	MH	re	NO	1,55	1,555.83
4009183 SLVER CRK-KING TO DIDE DES SUSSOENT WOOD		20814	4020303	33	22	66	77	u		3		
408927 LOWER SLVER CRKINS KING BOAD STOLE THE BUILDING	10/10/08	10/10/20	4025903		3010	PRE-EMRG HERB / MECH	,	Ş	-		1	138.00
4090160 SILVER CREEKINS KING RID-STOLING MICH. BY	127/89	127789	4025900		3150	MISC VEGWEED CONTRL		WH	-		1,600 %	8
4095032 LOATR & UTD OD UTD SUD DOES 11100-00	22591	2/25/91	4028900		3150	MISC VEGAMIED CONTRL	2	¥	-		2 500 0	9 8
4014622 LONTR SILVER CR. WTRSHO, POST-FUCORENT MECH BLANK	771/25	2/27/97	4026939	44	3520	800-VEG-CHEMICAL	1.28	YC	9	B ANK	3 151 6	ŀ
4095039 LOWER SUVER CRIMTESSIO - LANDSCHOUSE LAND BE AND	77100	9722/97	4026999	22	3020	600-VEG-CHEMICAL	25.7	¥	9	BLANK	42590	808
4096039 LOWER SILVER CR WTRSHO - LANDSCREVED LAND BLANK	771/85	2727/37	4026999	4	3040	602-LANDSCREVEG	I	ž		BLANK	7.037.45	15
	27,179	10000	402038	44	2040	602-LANDSC/REVEG	88	H	12 8	BLANK	2	236.00
See Kreen name 3 to acceptant and the state of the												ı

See Koy on page 7 for explanation of shading and delineation

Lower Silver Creek Maintenance Plan

Table 9 Lower Silver Creek - SCVWD Sediment Removal Records, 1977- 1995

ò	1460	2000	1120	1765	7060	150	800	350	150	950	810	2980	390	0006	29512
DAYS	es	3	2	8	30	2	11	12	40	40	2	10	0	5	15
LENGTH	350	15700	006	1900	2600	200	2500	1100	250	1050	1050	2600	350	4700	2600
ACMP	3.50	157.00	9.00	19.00	26.00	2.00	25.00	11.00	2.50	10.50	10.50	26.00	3.50	47.00	26.00
TO	13000	24500	12400	8800	6550	13300	10500	9800	13000	37750	37750	15500	20250	29200	31600
FROM	12650	9800	11500	7900	3950	13100	8000	8700	12750	36700	36700	12900	19900	24500	29000
DESCRIPTION	E84-231-28 84 Lower Silver Crk 680 to Jackson	E84-169-18 84 Lower Silver Crk Alum Rock to Cunningham S&D	E85-207-31 85 Lower Silver Crk Kammerer to 680 S&D	86 SILVER CREEK - SILT AND DEB REMOVAL - PRINCE GEORGE TO LAUSETTE AVE	86 SILVER CK-SILT & DEBRIS REMOVAL @ MCKEE RD U/S-D/S	87 Lower Silver Crk U/S Jackson S&D	88 Lower Silver Crk D/S Alum Rock Ave S&D	90 SILVER CRK - U/S ALUM ROCK - S&D REMOVAL (MOU)-J	91 SILVER CRK - D/S JACKSON - S&D REMOVAL (MOU)-J	80 LOWER SILVER CK - KING RD D/S TO PIPE - S/D REM	E82-376 82 LOWER SILVER CK D/S S. KING RD TO TRASH RACK S/D REM	E81-100 82 LOWER SILVER CK BETWEEN JACKSON AND CAPITOL EXP S/D REM	4087055 87 SILVER CRK-SILT & DEBRIS REMOVAL D/S MARTHA ST.	87 Lower Silver Crk Cunningham to Tully S&D Rem	4089121 89 Silver Creek - S&D D/S Quimby Rd
4	28	8	85		8	87	88	96		90	82	82	87		68
WO		E84-169-18		4086021	4086099	4087056	4088207	4090252	4091170	E81-2			4087055	4087014	4089121
RCH	901	901	99	901	901	901	904	99	901	902	305	902	902	905	905
CRK	4026	4026	4026	4026	4026	4026	4026	4026	4026	4026	4026	4026	4026	4026	4026 902

Lower Silver Creek Maintenance Plan

3. Maintenance Guidelines for Proposed Lower Silver Creek Project

3.1 New Lower Silver Creek Project Maintenance Requirements

To ensure the integrity and effective operation of the proposed flood control measures, a recommended maintenance program based on the existing maintenance guidelines is required. These recommended maintenance guidelines adopt the same (or equivalent) standards as those included in the District's SMP for the Lower Silver Creek and its tributaries for sediment removal and vegetation management, and bank protection. Equivalent standards would have the same (or less) impact than the SMP standards.

In general, proposed creek improvements associated with the Project will likely result in the reduction of bank erosion/failures and, consequently, of requirement for sediment removal frequency and quantities.

In addition the sediment transport channel, which is a major feature of this project, has been designed to effectively transport sediment downstream and minimize sediment deposition. However, Lower Silver Creek will still drain a heavily urbanized watershed after the project and could still be subject to large inputs of sediment from landslides in the upper watershed. It is therefore unlikely that sediment removal will be completely avoidable. It is anticipated that periodic sediment removal will be required in specific locations of Lower Silver Creek, albeit on a less frequent basis than before the project. It is also possible that certain areas of the sediment transport channel could be impacted by excessive vegetation growth that limits the ability of natural processes to form the channel. In these instances, selective pruning or application of herbicides could be required. Because the proposed design will result in a dynamic system, there is also a potential for undesirable erosion at the margins of the sediment transport channel (i.e. erosion of the slopes of the flood conveyance channel). If the integrity of the flood conveyance channel slopes is compromised, bank stabilization methods will have to be employed. These could include bioengineering approaches or more traditional engineered approaches.

The project design will modify the reach definitions that were used for the maintenance baseline. Table 10 provides the equivalency between both reach definitions.

3.2 Maintenance Activities

The basic goals of the maintenance program include keeping the channel sufficiently clear to provide 1 percent flood capacity at all times, eliminating hazardous conditions and repairing the facility as necessary. General tasks to be performed during annual maintenance operations include periodic inspection and repair of gabion baskets, removal of sediment and vegetation in the waterway, restoration of abraded concrete, trash and debris removal, fence repairs, weed control and elimination of any potentially hazardous conditions.

General descriptions of the annual maintenance activities can be found in the earlier sections.

Table 10 Look-up Table for Existing Maintenance Reach Definition vs. Projected Maintenance Reach Definition

		Existing Maintenance Reach Definition	Reach Doff	inition			Propox	Proposed Project Reach Definition
6	Station DVS Cross Street	D/S Station	D/S Station U/S Station	Channel Type	Reach ID	D/S Station	U/S Station	Reach ID DIS Station UNS Station Channel Type
Reach 4028901;	1080t;							
oto C	Coyote Creek Confluence (0+00) to Capitol Expressway (155+00)	of Expressway ((55+00)					
-	1 Confluence w/ Coyote Creek	00+0	13+15	Earth w/ fevbes, bench	10	9540	02+8	Natural earth slopes w/ reised maintenance road
					4	8+30	13+50	Vegetated blocks/gabion baskets slopes w/ raised maintenance road
2	2 US WPRR	14+15	17+42	Earth w/ levoes, bench		14+00	ŧ	
6	3 Hwy 101	18+00	24+00	Trapezoidal earth	2	!	!	Vegetaked blocks/gabion baskets slopes w/ raised maintenance road
*	4 U/S N. Marburg Way	24+00	51+70	Trapezoidal earth		1	28+00	
					5	23+00	37+65	Natural earth slopes w/ raised maintenance road
	2				24	37+85	51+00	Concrete lined channel
49	5 DrS King and McKee Roads	51+70	78+40	Trapezoidal earth w/ levees sometimes	8	24+00	70+00	Natural earth slopes w/ raised maintenance road
1					8	70+00	79+75	Concrete lined channel with fixed basedow channel
0	6 DrS Driveway Bridge	79+40	89+45	Concrete trapezoidal		78+75		
					8			Vertical textured colored concrete walts or gabion basket slopes w/ traised maintenance road
7	7 U/S Lausett Avenue	05+66	114+25	Trapezoidal earth w/ levees		;	100+70	
					8	100+70	107+25	Concrete lined channel with fixed baseflow channel
					30	107+25	113+80	Natural earth slopes w/ raised maintenance road
-	8 Kammerer Street	114+25	151+00	Trapezoidal earth	, M	114+40	123+40	Natural earth slopes w/ raised maintenance road
					9	127+40	129+60	Vegetated blocks/gabion baskets slopes w/ raised maintenance read
1					49	130+80	1	Vegetated blocks/gabion baskets stopes w/ raised maintenance road
T.	9 Urb Calarad Avenue	151+00	157+58	Trapezoidal earth		1	153+80	
Reach 4026902:	6902:					156+00		
No.	Capitol Expressway (155400) to Thompson Creek Confluence (316+70)	in Greek Conflue	100-016-70)		*			Vegetated blocks/gablen baskets slopes w/ raised maintenance road
9	10 U/S Dover Way	159+68	178+14	Earth levess w/ bench			168+00	
					A	169+00	171+40	Vegetated blocks/gablon baskets slopes w/ raised maintenance road
					8	171+40	180+00	Vegetated blocks/gablon baskets slopes w/ raised maintenance road
=	11 DrS Story Avenue	181+25	240+51	Earth w' levees	8	182+50	201+60	Vegetated biocks/gablon baskets stopes w/ raised maintenance road
					3	201+60	217+00	Vegelated blocksigablen baskets slopes w/raised maintenance road
					-	200,400		

3.2.1 Vegetation Management Requirements for Cross-sectional Features

The Project has three (3) cross-sectional features with specific vegetation management requirements. Typical cross-sections for all sub-reaches are presented in Attachment 1. A description of each different cross-sectional feature is provided below:

Committed Flood Conveyance area: Area of high maintenance, where vegetation height will be limited to 4 inches.

Sediment Transport Channel: Area of low maintenance, corresponding to the Sediment Transport Channel (including channel banks, emergent wetlands and base flow channel). Maintenance requirement in this section would be limited to removal of woody growth. Removal of target vegetation would follow the methods and Best Management Practices (BMPs) described in the SMP. Target woody vegetation consist of native riparian species such as willows and box elders and non-natives such as eucalyptus. The woody riparian vegetation removed is comprised of seedlings and saplings no greater than 2" in diameter at breast height (at height of 48"; dbh) for herbicide application and 6" for hand removal methods. Large stature, mature vegetation is not removed. Herbicide application and hand removal would be generally conducted once every year during the July 1st to October 15 period.

Riparian/Upland Habitat: This would be a "minimal or no-maintenance area" where trees and shrubs will be established; it includes the top of the left bank as well as the entire right bank. Examples of minimal maintenance would be trash removal and removal of large dead trees.

Although this new guideline uses a different vegetation growth criteria from the one described in the baseline maintenance guidelines (section 2.5), it will not result in more significant impacts and would allow more vegetation growth than the baseline maintenance guidelines (Table 11). Under the proposed maintenance guideline, considerably less area would be subjected to heavy maintenance (or equivalent vegetation condition A: no vegetation) than under the existing guideline (vegetation codes are described under Attachment 2). Conversely, considerably more acres would be kept under minimal vegetation maintenance (or equivalent to condition E: almost unrestrained vegetation growth). Finally, considerably more acreage would be subject to intermediary vegetation maintenance under the proposed plan. This intermediate condition corresponds to the sediment transport channel where large flexible vegetation, such as cattails and tule, will be allowed to grow freely but where woody growth will need to be removed on a regular basis. Table 11 provides a comparison of vegetation areas that would be affected under the project with vegetation areas affected by the baseline.

Table 11 also shows that there is a significant increase in total affected vegetated area. Since the increase corresponds to the sediment transport channel and the riparian/upland areas, the acreage increase is considered to be a beneficial environmental impact.